# THE FARMER & GARDENER.

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## *American Farmer Establishment.*

BALTIMORE: TUESDAY, MAY 23, 1837.

If there be any agriculturist who may be anxious to make an experiment in making Beet Sugar, he should not be deterred on account of the lateness of the season. Although it would have been better to have gotten the seed in some weeks ago, there is still time, if sown any time during this month, for the beets to mature by the middle of October. So far as the practicability of making beet sugar may be concerned, the experiment can be as well tried on the tenth part of an acre as on any larger portion of ground; and we will venture the assertion, that there is no farmer's wife from the Penobscot to the Mississippi, who, if she were to put her ingenuity to the test, but could with ease fabricate sugar from the root. Our knowledge of the ingenuity of the sex—of their unswerving perseverance in the pursuit of laudable ends, conspire to make us believe that there is no obstacle which they could not overcome, and as the trophy on this occasion is one to be dedicated to patriotism, we hope each of our readers will feel an appeal made to his pride, to provide his better half with the raw material for making a small portion of domestic sugar.—Our head to a dernier, give an American lady a bushel of beets, a curry comb, or a rasp, a boiler and fuel, and she will make out to manufacture sugar good enough to grace any table in the land.

### DEEP PLOUGHING.

We are indebted to the politeness of an esteemed friend at York, Pa. for the loan of a pamphlet written thirty-six years ago by *T. Moore*, a worthy member of the Society of Friends, a resident of Montgomery county, Md. The pamphlet is entitled, "*The great error of American agriculture exposed, and hints for improvement suggested.*" Among the subjects treated of, is that of *deep ploughing*; it will be perceived that Mr. Moore is a strenuous advocate for penetrating the earth to considerable depth, and that he ascribes much importance to its meliorating effects. The experience of this gentleman, (he being a practical and scientific farmer) the facts adduced by him in illustration of the correctness of his views, together with the force and tenor of his reasoning, all tend to impart importance to what he advances. We read his essay with feelings of satisfaction, generally approving of his views. With respect to deep ploughing, we have always entertained the opinion, that it was one of the most effective means that could be used to render the earth fertile, and have, therefore, regretted to find so many bowing to the prescriptions of ancient prejudices.

Than the late Mr. John Yellot, sen. there perhaps was not to be found a more intelligent, thorough-going practical farmer; and he, as we do know, was not only a believer in the virtues of deep ploughing, but carried his faith into practice, much to the advancement of his private fortune. By deep ploughing, judicious rotation of crops, and a wise use of the manure made on a farm he purchased some years before his death, he brought it into a state of fertility that challenged the admiration of every one who saw it.

We have commenced the publication of this pamphlet in to-day's paper, and ask for it an attentive perusal.

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We have before us three specimens of sewing silk made in Pennsylvania, the two first were fabricated by Mrs. Ritner, the lady of governor Ritner. She fed her worms upon the black mulberry, and used the common reel and wheel. The third specimen was made by Mrs. Mahan, the lady of Mr. J. M. Mahan, of New Italy, Pennsylvania. The touch and finish of each, do great credit to the ladies by whom it was respectively made. Mrs. Mahan's worms were fed on the white Italian Mulberry, and like Mrs. Ritner, she had to use the common Reel and Wheel.

We derive great pleasure in recording these strong evidences of the patriotic zeal of two of the matrons of the Key-stone State. Such devotion to a branch of industry so eminently entitled to the fostering care of the nation, endear them to generous hearts. The example they have set is worthy of all emulation; and if good deeds can perpetuate names with which they may be associated, surely those of these ladies will live through all time as among the benefactresses of our country. We know no effort, which patriotism is capable of exerting, more ennobling in its influences than that which promotes a new branch of human labor, unfolds a source of employment to the industrious poor, and vouchsafes to enterprise its legitimate reward. Such is the character of the silk culture: and for the part which these estimable women have taken to enkindle a spirit of laudable rivalry, they are entitled to, and we trust will receive, the benedictions of the just.

### RUTA BAGA.

Have any of the farmers of Warren provided themselves with the seeds of this root? If not, we earnestly entreat them to do so—there is time yet. The Ruta Baga is one of the most valuable roots, either for feeding horses, cattle or sheep, or for the table, to the culture of which the farmer can turn his attention; and its large yield gives ample payment for labor and soil. All live stock eat this root with avidity and thrive upon it. One of our villagers has fed a horse and cow during the past winter and cold spring, with the produce of less than an acre of land sown with this root, which has been almost their only food; the horse is in good flesh and hardy to bear fatigue, and the cow has increased in weight, and yielded milk the whole time, from which butter as yellow as gold was made in sufficient quantity for his family's consumption, and now and then a beautiful specimen for his neighbors' tables. He informs us that the food of his horse and cow have cost him much less the last season, than any of the preceding years for many past.—*Belvidere (N. J.) Apollo.*

We are gratified to find such strong commendation of this most excellent root in so respectable a print as the above, and still more gratified to find in its able editor a most worthy co-adjutor. In the root culture, generally, and particularly of *this*, we have a deep interest,—an interest arising out of our honest convictions of the propriety of the measure, and therefore, receive every evidence of its growing favor with feelings of peculiar delight.

We raised a few bushels of Ruta Baga last year, merely as an experiment, and from our high esti-

mate of its intrinsic worth, we shall greatly extend its culture this season. Those which we raised were as good for stock or the table on the 1st of May, as they were when we took them from the field last fall; and we most sincerely believe might have been kept in edible condition during the whole of the present month.

We would advise all who have not yet prepared their ground, to do so without delay. The Ruta Baga will grow in any strong loam; well manured; new ground suits it admirably well—perhaps best; but any soil with a due proportion of sand in it, well manured, will bring a good crop. They thrive best in *drills*; but will answer well if sown *broad-cast*.

In conclusion, we would advise every one who intends to grow them to put them in by the 15th June.

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A letter to the editor of the *Farmer and Gardener*, from an esteemed subscriber in *Jefferson* county, Va. has the following remarks on the prospect of the crop of wheat:

"Our wheat crop looks wretched beyond any thing I ever witnessed. If the season should be the most favorable until harvest, it is possible some of the most *forward* fields may make some wheat; but the greater portion of them will not be cut; and for myself I feel well satisfied that there cannot be as much wheat made in this county as there was last year. I don't know a farmer in my neighborhood that is not ploughing up more or less of his wheat, and planting it in corn or seeding it with oats."

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Extract of a letter from a subscriber to the editor of the Farmer and Gardener, dated

BLAKELY, Alabama, May 1st, 1837.

"Herein enclosed I send five dollars, and wish your valuable paper continued to me another year.

"As the culture of silk excites a great deal of interest at this time in the U. S. (and deservedly too I think) I will state some facts in relation to the cultivation of the Morus Multicaulis in this vicinity, which have come under my knowledge—Last year in May I set out about 35 cuttings from the M. Multicaulis in my garden, 30 of which lived, and many of them grew to the height of 12 feet during the summer—In March, this year, I took 500 cuttings from them, which I set out in a field which is scarcely fertile enough for corn, and the most of them are growing luxuriously; in fact out of the 500 above mentioned, and 6000 additional cuttings of the M. M. which I procured from Col. Chester Root of Mobile, and set out in the same field in the months of February and March of this year, not more than 150 have died. The land contained in the field mentioned may be termed the better sort of pine barrens; it was (as it is here called) cow penned year before last; previous to which time it had laid fallow for a number of years. In setting out the cuttings I used no manure, but prepared the beds well by pulverizing the earth.

"One of my neighbors set out 400 cuttings in February this year in the most ordinary pine barren land, which has, however been in cultivation for a number of years, and all but about 40 of them are now growing finely. He used manure in setting out the cuttings, but the land is nothing but a bed of sand with very little admixture of clay; in fact he made the selection of land with the view of trying the experiment whether the M. Multicaulis can be cultivated on the ordinary pine barren lands or not. So far the experiment has succeeded, but it is not time yet to judge of its ultimate success. I think it a matter well worth the serious consideration of every well-wisher of his country, that a thriving population should spread over the immense pine barrens which extend along almost the whole of the south eastern coast of our country, and that villages and cultivated fields should take the place of the primeval forest, thereby connecting the sympathies and interests of the extremes of the union, which is so necessary to the well-being of our government. If, therefore, through your valuable paper, you would invite experiments and communications on the subject of the capability of pine barren lands to produce the mulberry or other vegetables which would largely administer to the wants of a community, directly or indirectly, I think it would be for the public good.

"I have heard some doubts expressed as it regards the practicability of growing the silk worm successfully in so humid a climate as the vicinity of Mobile and Blakely. If you are in possession of any facts that would bear on the question, you would oblige me by giving them publicity."

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## LARGE SWINE.

Extract of a letter from a friend in New Haven, Connecticut, to the editor of the Farmer and Gardener, dated May 13, 1837.

"I have for some time been taking memoranda of thrifty shoats and hogs butchered in this section of the country. I give you the following account of two pigs and hog butchered last fall, which, perhaps, were pretty good samples of the *thin rhind*.

"*Wm. Burton* killed a hog 26th Dec. 1836, being one day less than 14 months old: he weighed 500 lbs. without the rough fat, with it 530lbs. gained each day on an average 21 ounces—61 lbs. lard.

"*Isaac Townsend* butchered 2 pigs 21st December, 1836, about 8½ months old—weight 240 lbs. 260 lbs., rough lard not included."

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The "*Apollo*, published at *Belvidere*, New Jersey, under date of the 15th instant, says:

Peach trees were blossoming last week, yet so cold and backward is the season, that it is feared few peaches will ripen to fall or be plucked.

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OATS.—The weather continues very dry, and the oats look unpromising. Wheat and Rye have improved but little.—*Centreville Times.*

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THE GROUB-WORM.—This provoking enemy has made its appearance in the corn fields, cutting down all the young corn shoots that come in its way.—*Centreville Times.*

## OUR AGRICULTURAL INTEREST.

The present storm will shew that the planters are the stamina of the country. While all around is crashing, they stand firm, from the seaboard to the mountains—and we hazard nothing in asserting, that at this moment, there is not in the Union a more solvent State, than South Carolina. The crisis has found our planters for the most part out of debt—and where not out of debt, able to shew abundant means for meeting their liabilities. Most of the Cotton stored at the different home depots, we have reason to believe is in second hands—and though many of our planters have lost the opportunity of profiting by recent high prices, the stock yet remaining in the country, however limited the present demand, is so much actual wealth—equivalent in supporting credit, to specie; and most who have not sold are fortunately in a condition to await a turn in the tide. Hence the comparative exemption of our merchants thus far from the general bankruptcy. The only two large houses in Charleston which have been forced to suspend, suffered from the overtrading of others in the North and West, not from any imprudence of their own—and the few retail houses which have gone, were we believe principally branches of broken houses at the North. Although stocks have gone down, and must decline further yet, there is universal confidence in the soundness of all our Banks.

*Charleston (S. C.) Mercury.*

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HONOR TO PRACTICAL AGRICULTURISTS.—NATIONAL BENEFACTORS.—The names of those who have enriched our gardens with useful and valuable plants are deserving of record and remembrance. Sir W. Raleigh introduced the potatoe, Sir Anthony Ashley first planted cabbages in this country—a cabbage appears at his feet on his monument; Sir Richard Weston brought over clover-grass from Flanders in 1645; figs were planted in Henry the Eighth's reign, at Lambeth, by Cardinal Pope—it is said the identical trees are still remaining.—Spilman, who erected the first paper mill at Dartford, in 1590, brought over the first two lime trees, which he planted, and they are still growing. Thomas Lord Cromwell enriched the gardens of England with three different kinds of plums. It was Evelyn, whose patriotism was not exceeded by his learning, who largely propagated the noble oak in this country, so much so that the trees he planted have supplied the navy of Great Britain with its chief proportion of that timber.—*Eng. pap.*

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ROT IN COTTON—Dr. R. Harden has recently published a long article on the "Rot in Cotton," which he supposes to result from a diseased or morbid condition of the seed. He proposes the following remedy:

"Select a part of the crop purposely for seed, let this cotton remain without picking until a killing frost, then, when the weather is cool, pick the cotton in dry weather, expose it to the sun and air every day until it is ginned, then sun and air these seed several days, until they are dry, then keep them thinly spread in a large room, opening the door and windows when the weather is fair, frequently stirring them and sunning them until planting time. Seed thus managed, I believe, will produce cotton that will not rot."—*Southern Times.*

## THE GREAT ERROR OF AMERICAN AGRICULTURE EXPOSED, AND HINTS FOR IMPOVEMENT SUGGESTED.

BY THOMAS MOORE.

Prejudice, that great bar to improvement in the arts and sciences, perhaps no where exerts its baneful influence with more mischevious effect than in the practice of agriculture, particularly on this part of the American continent. Our predecessors emigrating from the different European countries, each brought with him the prejudices he had imbibed in his native land, and adopted the practice in this country, that he, and perhaps his forefathers, for ages before him, had adhered to, notwithstanding the great difference of soil and climate absolutely requiring a very different course of conduct. These prejudices acquired strength by time, and practices became venerable for their antiquity: and being accustomed to consider ourselves as the children of the countries from which we descended, of course we looked up to them as the only legitimate sources of improvement; the consequence of which has been, that notwithstanding considerable improvements and discoveries in agriculture have been made in Great Britain and other European countries, we have not derived those advantages from them, which might have been expected. Many of them having been implicitly adopted here, without the necessary variation for the difference in soil and climate, have failed. These unsuccessful experiments have tended to confirm the people of America in their former prejudices, and to induce them to treat with contempt every appearance of innovation in theory or practice.

So that, till very lately, a person in America would be almost as much exposed to ridicule by attempting to teach the art of ploughing, as that of walking, or any other common animal function. But happily for us, since the revolution, some of the citizens of the United States begin to think for themselves, and to seek in their own country for improvements; and during the short period of twenty years since that event, greater advances have been made in American agriculture than in a century preceding.

Under these auspices, I am encouraged to hope, that at least a part of the community will not condemn the following observations unheard. I wish my readers to divest themselves of every prejudice, as fully as if they had never read a treatise on agriculture, or were acquainted with no system of practice, until they have fairly weighed the arguments: then compare them with their own experience, and according to their merits let them stand or fall.

The native soil of a great proportion of the United States, so far as I am acquainted, or have been informed, consists of a black mould from one to four inches deep (on river bottoms, and other low places often much deeper) probably composed from leaves and other decayed vegetables. Immediately below this, is found a stratum of loam, clay or sand, most commonly loam, intermixed with some kind of stone. The mould or virgin soil is always found extremely productive.

The climate, with respect to heat and cold, is various; in the eastern and middle states, the frosts are severe, the surface of the ground being generally frozen for several months during winter; but their severity gradually decreases as we advance southward. In every part of the United States a considerable quantity of moisture falls in the winter and spring, in the different forms of snow, hail and rain: In summer, thundergusts, with intervals of hot dry weather, are also common.

Let us now consider some of the most visible effects of the climate, on the lands in tillage.

The winter frosts are no doubt useful, in dividing and ameliorating the soil; repairing in some degree, the injury it sustained the preceding summer. During summer, a great proportion of the rains falling hastily, the consequence is, that wherever the ground is not opened to a sufficient depth, to imbibe the whole before the surplus can have time to penetrate the hard *pan* beneath, a part of the soil becomes *fluid;* and if the surface is not a dead level, a portion of it is carried off: the remainder has a tendency to settle into a *compact mass*, which, if suffered to remain, without stirring, through the hot, dry weather, that often succeeds, until the particles of moisture it contains, are evaporated, becomes of the consistence of a *sun dried brick*, and consequently impervious to the roots of vegetables.

These things being premised, I shall, without further observations, proceed to the subject matter, and endeavor to enumerate some of the evils inseperably attached to that great error in American agriculture, *shallow ploughing;* beginning with new lands, or those just cleared of wood.

What is the language of our farmers and planters on these occasions? Our soil is not more than two or three inches deep; we must plough *shallow*, otherwise we shall turn up too great a portion of *dead earth*, and ruin our crops; they also say, we must plant *wide*, otherwise a drought will cause our corn to fire;* and for these supposed weighty reasons, those two practices are almost universally adopted on new lands, to wit:—shallow ploughing, and wide planting.

Here our men of experience prove they are acquainted with the effect, without knowing, or even inquiring into the cause. Their mistaken opinion, respecting dead earth, will be noticed in due place; but it remains here to be proved, that the necessity of wide planting, is one of the consequences attached to *shallow ploughing*. All plants imbibe moistnre from the earth, by their roots; if this portion of their sustenance is withheld, tho' every other species of vegetable nutriment abound in the soil, the plant becomes sickly, growth ceases, and finally, death ensues. In search of the necessary supply, the roots of plants are extended in all directions, where the soil is open enough to admit them, and to a distance, proportionate to the demand; two plants of the same kind, require a greater quantity to preserve health, than one: hence it will appear, that a drought of sufficient duration to extract most of the moisture contained in that part of the soil, loosened by the plough, may yet leave sufficient to preserve one plant in health; but if divided, both must suffer, for neither can penetrate the hard unstirred earth below, for a supply. But in case of long droughts, no distance whatever will insure Indian corn from suffering, when the under stratum is hard, and the ploughing shallow, and under these circumstances, few summers are so wet, but that close planted corn, at some period of its growth, discovers the want of a full supply of moisture, which perhaps might be amply afforded by one or two inches greater depth of ploughing. They have discovered, that after the first year, several succeeding crops will admit of being *closer* planted. the fact is, that the surface having now been for some time cleared of leaves, rubbish, &c. and exposed to the action of frost, sun and dews, that portion of earth, lying originally immediately below the black mould, and called dead earth, which was turned up by the cultivation of the preceding year (for in common soils, it is almost impossible to plough so shallow as to avoid turning up some, in new grounds) has now acquired a dark colour, and therefore not known to be the same; and some of the obstacles to ploughing, being removed, they almost insensibly, go an inch or two deeper, without shewing any greater appearance of the yellow or dead earth, so much dreaded, than the preceding year: this furnishes a more extensive pasture,* for the roots of the plants growing therein, and also becomes a more copious reservoir for treasuring up moisture for the needful time; and consequently affords a supply for a greater number of plants. The second year, is generally found to be much more productive than the first, after which our common lands gradually decline.

The undecayed fibrous roots prevent much loss of soil by washing, the first year, on lands not perfectly level; it generally begins the second, and continues annually. The ploughing being about four inches deep, does not afford a sufficient quantity of loose earth, to imbibe the whole of the heavy showers that frequently fall during summer; the consequence of which is, as before observed, that when the open soil becomes *saturated*, water must accumulate on the surface, and flowing off in torrents, bears away a portion of the finest, and most valuable part of the soil; succeeding ploughings bring to the surface a fresh supply of mould, which in turn follows the last. Thus ploughing and washing alternately, following each other, the original soil is soon deposited in sunken places, beds of creeks, rivers, &c.

This waste is in some measure compensated, and fertility continued, by the fresh earth brought up from below; for the plough continuing to pass about the same depth, must of course descend into the unstirred earth, in proportion as the open soil is carried from the surface; but of this the cultivator appears ignorant; the proportion brought up at each ploughing, being small, and soon acquiring a dark color by being exposed. I am fully convinced, that in many places the surface is now at least the whole depth of the ploughing lower than at first clearing: Of this we need no other proof, than the half buried posts in low places, the heads of rivers, creeks and mill-ponds filled up, which are every where to be seen in our hilly cultivated lands.

But, notwithstanding the before mentioned supply of vegetable earth from below, the soil em-

* The lower leaves turn yellow.

* For want of a more appropriate term, the word, pasture, is used to express the body of loose earth, into which, plants freely project their roots in quest of food.

ployed in cultivation, must annually become less fertile; because the coarse, the heavy and adhesive particles of earth, remain on the spot from the beginning, and those of the same properties contained in the fresh earth brought from below, also remaining, while the finer and more friendly parts, are continually carried away; at length the proportion of fine soil becomes too inconsiderable, to answer the purpose of vegetation to any degree of profit. Thus the land becomes sterile, not so much from the vegetable nutriment being extracted from the soil by the growth of plants, as by the soil itself being removed: that this is a necessary consequence of *shallow ploughing*, on lands that are in any degree hilly, in this climate, I trust, has been satisfactorily proved.

Another material evil that results from the practice of *shallow ploughing*, and which applies to all surfaces, level as well as hilly, is the injury the growing crops sustain for want of a more regular quantity of moisture in the soil: we know by experience, that either extreme is fatal to most of our crops; that the practice is calculated to produce both, at different periods, is evident: for, during a long continuance of *wet*, the water must *stagnate* in abundance about the *roots* of the *plants*: and on the contrary, a short continuance of *drought*, extracts nearly the whole of the *moisture* contained in the thin covering of *loose earth*, and it is not to be supposed, that the tender roots of plants in quest of a supply, can penetrate the *compact* earth *below*, which has been hardening ever since its formation.

Hitherto I have principally alluded to summer crops: but if we observe the effects of *shallow ploughing* on winter crops, we shall find the injury still greater. All that has been said, will apply to them in their autumnal growth; but it is in the spring, and early part of summer, that it often proves particularly injurious, and sometimes fatal to them. Those who have been accustomed to stopping leaks about mills, &c. know, that earth thrown into water, made to incorporate with it, and then subside, settles into a more solid mass, and becomes more impervious to water, than in any other way it can be applied: no ramming is equal to it: the same thing frequently takes place in degree, on the surface of our fields. The great rains that often fall about the vernal equinox, drench, and almost render *fluid*, our *shallow worked* soils; the solution of the finer parts, entering the pores, as the water evaporates, the whole settles into a *compact mass*, and so remains till harvest; for, notwithstanding it may be frequently moistened, yet no other disposition of parts, can be supposed to take place, until operated on by frost or the plough.

This state of the soil, is too compact to admit of the free extension of the roots, even when moist; but, when hardened by droughts, every particle of nutriment not in contact with some of the roots, is effectually *locked up* from the *suffering plants*. So that it often, nay almost always happens, on lands worked in this way, unless very rich indeed, that crops of wheat that look promising in the fall, and early in the spring, begin to decline towards harvest; and people are complaining of the unfavorable appearance of their wheat: when harvest arrives, the straw is almost too short to cut, and the heads about half the proper length, and those not well filled, yielding six or seven bushels to the acre, where twelve or fifteen might have been reasonably expected, from the quality of the soil; these appearances and products agree with my constant observation for many years past, especially on early sowed corn ground, damages by fly, rust, &c. excepted.

If *manures* are applied to *shallow worked* soils, their good effects in general, will be of short duration, as most kinds must soon inevitably travel the road, the virgin soil has, before them.

I shall next enumerate some of the good effects to be expected, and which are constantly experienced by a *contrary* practice, viz: *deep ploughing*, when judiciously pursued; and then endeavour to prove the futility of the arguments adduced in favor of shallow ploughing.

In the cultivation of plants, three things are particularly necessary: First, that sufficient *pasture* is prepared for their roots; secondly, that the soil abounds with proper *aliment*, and thirdly, that *moisture* be duly administered, in neither *too great* nor *too small* quantities. That *deep ploughing* is calculated to promote these ends, I believe will not be hard to prove, particularly the first and third.

The quantity of earth operated on, being great, it very seldom, if ever happens, that any fall of rain is so great, as completely to *saturate* it; and until that effect takes place, or nearly so, very little change is to be expected in the disposition of its parts; and therefore when the redundant moisture evaporates, it leaves the soil as it found it, except a small crust on the surface; the succeeding ploughings, instead of being applied to repair the injury the soil has sustained by great falls of rain, go to the further pulverizing and opening it suitably to receive the capillary vessels of the plants. Thus the pasture becomes not only *more extensive*, but far *better* adapted to promote the growth of plants.

With respect to *aliment*, naturalists differ widely in their judgment respecting its nature and composition; my opinion is, that the food of plants has not yet been fully ascertained by any. This, however, we all know, that manures of all kinds, contribute in some way or other to the growth of plants; whatever may be their food, I will not pretend to say, that it is communicated to the soil by the mode of cultivation under consideration; but this I will say, that it is far better calculated than the contrary practice (shallow ploughing) to retain the quantum originally found therein, or afterwards applied to it; and further, if dews are nutritive, the superior openness of the texture in this mode, qualifies it to derive every advantage to be expected from that source.

But, perhaps the most valuable of all the effects resulting from *deep ploughing* is, that it in a great measure preserves an equal quantity of moisture in the soil; for as we seldom have a rain so great, as to produce an unhealthy stagnation of water about the roots of plants set in a soil 7 or 8 inches deep; so on the contrary, we scarcely ever have a drought of so long continuance as to extract all the moisture to that depth; for it is to be remembered, that after a few inches nearest the surface, moisture is extracted, by slow degrees: thus for instance, if it requires one hot day to dry the first inch, probably it will require three, for the second, six, or more, for the third, and so on; perhaps nearly in geometrical progression.

Thus it appears from the foregoing observations, that by this mode of practice the great loss sustained by *washing*, an evil so much to be dreaded in this country, is avoided; that whatever manures are applied, are safely deposited, and will act with full effect; that the growing plants are abundantly supplied, during the whole of their growth, both summer and winter crops, with an open soil, for a free extension of their roots, and also, with a regular supply of moisture; so that their growth is at no time impeded by any small irregularity of season; the depth of soil being to them, with respect to wet and dry, what the ocean is to small islands, with respect to heat and cold; the means of a tolerably regular temperature.

[To be Continued.]

## BEET SUGAR.

FROM THE ALTON OBSERVER.

The following very interesting letter on this subject has been handed us for publication by the gentleman to whom it was addressed. Mr. CHILD went to Europe under the auspices of a company consisting of Messrs. B. GODFREY, W. S. GILMAN, Dr. B. F. EDWARDS, GEO. KIMBALL, and other citizens of this State. The object of the company, as we understand, it to introduce, if practicable, the culture of the sugar beet, and its manufacture, into Illinois. Mr. C. is himself connected with the company, and has gone to France for the purpose of acquiring such information as well be necessary and useful for their future operations. His letter will doubtless attract the attention of all our readers.

P. S.—Since the above was written, we have been informed that the company above referred to has been incorporated, for the purpose of manufacturing sugar from the beet, oil from the poppy, and the culture of silk. The capital of the company is $200,000, with the privilege of holding real estate to a certain extent. We trust they will, in Western phrase, "go ahead."

ARRAS, JAN. 9, 1837.

DEAR FRIENDS: I have now been one month an observer or laborer in a sugar manufactory, and have made short visits to several others. The beet sugar business, taken in all its branches and bearings, is interesting beyond my expectations; but to the mere manufacturer, I doubt whether it is as profitable as Pedder's report would lead one to suppose.

In the first place, the beets do not yield, on an average, more than *five* per cent. of sugar. They may yield more when first dug and before they have begun to *sprout*, but I am satisfied that *six* per cent. is the utmost that can be calculated upon, under the most favorable circumstances. The beets, after being gathered together in heaps and covered with earth to preserve them from frost, soon begin to sprout. By the middle of December this season, which had been warmer than usual, they had put forth considerable. Various expedients have been employed to prevent this heat, which is generated in the heaps, and gives rise to this, but none of them have as yet completely succeeded. This shows the importance of an early sowing, and an early commencement of working up the crop. Here the seed is sown in the first days of May. In Illinois I should suppose it might be sown as early. The work-

ing up of the crop ought to commence before it has attained its utmost growth, say in the last days of August or the first of September at farthest. There will then be seven months for the manufacture, and in most of those months laborers have little employment, and may be hired for comparatively small wages.

The quality of the sugar earliest made is the best, as well as the yield the greatest. In fact, a small quantity of the first product of the season is all the beet sugar I have met with that appeared to be fit to use *without refining*. In France very little except refined sugar is used, or had been for a long time before beet sugar was introduced. The meanest *cantines* (liquor shops) and the poorest families use constantly and exclusively refined sugar. To this circumstance I attribute the fact, that a certain bitter taste, generally belonging to the brown sugar of beets, has not been much mentioned here, and not known at all in the United States. It would probably be thought of great importance there. People are not agreed about it here. Some maintain that the brown sugar may be made at all times of such quality as to admit of universal use, and that in point of fact it is used to a considerable extent already. Others have told me that neither the brown nor refined sugar of the beet is equal to that of the cane. I feel able myself to contradict the latter assertion. I have used the beet sugar constantly since I arrived in France, and I can perceive no difference in flavor or quantity of saccharine between it and the sugar of cane. If there be any difference, it consists in a certain brilliant whiteness, which beet sugar seems to me to possess in a degree superior to most of the colonial sugar. I have good authority for saying that the French custom-house, though many tests have been applied, find it impossible to distinguish satisfactorily between the two. The reason why they seek to do so is, that a drawback is payable on the exportation of refined sugar of *the colonies*. The refiners offer beet sugar for the drawback, and obtain it, notwithstanding great vigilance is exercised upon the subject.

You see, therefore, that the sugar in a refined state presents no such difficulty as it does when raw. I have mentioned that difficulty, not because it weighs much in my mind, but because I think it probable that in the United States, where the consumption of brown sugar is great, considerable disappointment will be felt when the true character of that of the beet comes to be known. That character will undoubtedly be improved, especially in a country where the habits of the people demand a great deal of raw sugar. The beets will be better preserved, the machinery perfected, and the selection of seeds and soils made with more intelligence and care. I have before me a specimen of the brown sugar of the beet, as full of saccharine and as free from any bad taste as any cane sugar I ever saw, and far more beautiful in its appearance. It is like a rich yellowish New Orleans brown, that I have occasionally seen in the American markets, only a shade whiter. I have also a specimen of *clayed* beet sugar, of a pure whiteness, and free from all ill flavor. While, therefore, I state the general objection to the brown sugar of beets, I also say that, in a well-provided and well-conducted manufactory from beets just dug, or very well preserved, brown sugar can be made as good, in every respect, as any from the cane, and far more beautiful and attractive in appearance.

The refining of sugar is not in any instance known to me connected with the manufacturing of it. I see no reason why they should be thought incompatible, especially as I am told that the same steam-engine would serve for both; and also for a third object, which I had not heard of until I come here, viz. the distillation of the refuse molasses into alcohol. This is not yet used for drinking, though I think it probable it will be converted to that use, but for making varnish, and other applications to the arts. This method of *utilizing* the molasses, after two or three deposites of sugar, is beginning to attract great attention among the sugar manufacturers.

The value of steam in the various operations of heating and evaporating, whether in the manufactory or refining of sugar, cannot be overrated. The superior economy of it although the first outlay is greater, cannot be questioned. It requires less fuel and fewer hands, and, in point of neatness, convenience, and despatch, admits of no comparison with any other agent. A method of distilling by steam has been discovered and patented in Belgium, which is said to possess the same character of superiority over the common process by furnaces, as the use of steam in sugar manufacturing and refining.

I have paid some attention to refining, and, I think when I return to America, I shall bring all the secret about which L******* and his friend ****** made so much ado, and of which the former claimed to be the discoverer. I *guess* there was nothing but what Pedder got in England and France. The fact is, that the introduction and rapid improvement of the beet sugar manufacture in France have given such an impulse to invention and to chemical research, that it is morally impossible for a single year to pass without bringing forth something new and valuable in the arts of making and refining sugar. I am informed, since my arrival here, that a great discovery has recently been made by a Frenchman in Brazil, who has lately returned to France and patented it. It consists in making and refining sugar *by one operation*. There are as many systems of sugar making here as there are sects of Christians in America. A new one is lately introduced, which is supposed to be superior to all others. It is my intention to examine all, before I give a preference to any. The most interesting aspect of the beet sugar business is its bearing upon agriculture and rural economy.

It enriches the land, both as an excellent substitute for fallowing, and as producing an immense quantity of capital manure.

It has the latter effect in various ways, but principally by feeding a large number of cattle and sheep. The former are fattened in three to three and a half months, in a manner really superb. So fine specimens of beef creatures are seldom seen in the United States, after six months of the best pasturing and stall-feeding. The sheep are fattened in six weeks. At the manufactory where I have been, they pay, on an average, about six louis for cattle, and sell them for eleven. A louis is about $4 87. I suppose that this branch of the business would be quite as lucrative in the United States, where stock animals may be bought somewhat cheaper. This, you see, is doubling capital three times a year, with the help, however, of the pulp, or pomice of the beet. This can be kept good any desirable length of time. It is sold here at ten cents the cwt.

The profit of raising the beets is very great, according to estimates which I have from the most intelligent sources. I do not find it so high as Mr. Pedder did. My data make the nett gain in France, after paying rent, ploughing, weeding, hoeing, digging, and preserving, 404 francs per hectare. This measure is a trifle over two English acres. Consequently, the profit of cultivating beets on an acre will be 202 francs—about. Can you wonder that land has risen from 50 to 150 per cent, in the districts of the sugar manufactories? The wages of labor for cultivating and manufacturing the produce of a hectare amount to $56 81. This would give for 100 acres $2,840, nearly; and for 400, which would be the quantity required for the largest establishments, $11,930, to say nothing of the profits of the proprietor or leaseholder, when he and the laborer are one and the same. In this case, besides getting pay for his labor, and the rent or interest of his land, he would receive $38 profit per acre. Wages will be higher in America, and the profits of the laborer and proprietor still more encouraging. In one manufactory which I visited, two-thirds of the hands were women, who are paid much less than men; but there is no reason why it should be so, for they do just as much work and just as well as men. They do the principal part of the weeding and dressing of the crop every where.

The company ought to send out their orders and funds for purchasing seeds pretty soon after the receipt of this letter. The price here is stated at thirteen cents per pound, but the general price for the season is not yet fixed. It is usually as regular as that of wheat, and I presume will settle down at something less than the above. The transportation to Dunkirk, a convenient place for embarkation, would be three or four dollars for one thousand pounds. This would be enough to sow one hundred and sixty-six acres. A drill for the sowing would cost $110,* but I have heard of a new instrument, which is said by some to be better, and will not cost above $20. The most material point in sowing is the manner of ploughing. The land must be ploughed eight inches deep at least, and this ought to be done in the month of August. Still fine crops of beets have been obtained by breaking up grass ground in the spring immediately before the seeding. The land should be turned up handsomely, and all the grass and other vegetable matter fairly deposited underneath. Then it must be harrowed deep and fine, but the same way with the furrows. If the furrows be disturbed, it spoils or greatly injures the crop. The seed is to be sown in rows, twenty inches apart, on the top of the furrows, and the same way with them. No plough must enter after the sowing, but the land must be dressed two to four times, according to its tendency to weediness, with the hand and hoe. The vegetable matters decay, and give their whole nour-

* The drill of Bement, of Albany, which costs but $10, would answer equally as well.—*Editor Farm. & Gard.*

ishment to the beets. I suppose these remarks may be of less consequence to the proprietors of rich prairies of the West, than to those of the lands in France, and in Northern and middle States of America. There can be no doubt, however, that the decomposition of fresh vegetable matter will afford a more active stimulus to vegetable life than old mould, however rich. The land for beets must be *good*, but it may be too good. In this case it will produce beets of an enormous size, but hollow and decayed, and affording less saccharine than much smaller ones. Very poor land, made rich by manuring, is said to yield large beets, containing a great deal of potash and sal ammoniac, but very little sugar. At the first weeding, when the beets are about one or one and a half inches high, they must be thinned so as to leave one plant to every twelve or thirteen inches of row. If there be spaces where the seed has not come up, some of the plants pulled up should be transplanted into those spaces. There are some other considerations which it is material to suggest to you at this time. The first is the necessity of providing seasonably a store of *good bones*. In the proper making, washing, and otherwise cleansing and reburning of animal coal, consists the soul of a beet sugar manufactory. The best bones are those from kitchens, meat shops, dead horses, and other dead animals thrown away. A Frenchman would make his fortune out of the dead hogs and dead dogs which float every day in the East river. Fresh bones are the thing. Those which have been bleaching a good while in fields and highways are very nearly worthless. Those who intend to make beet sugar in the United States must look beforehand to the collection of bones. If they should have more than they want, which is scarcely possible, they will have sufficient demand for the surplus. The profits of the manufacture of animal coal, though constantly declared to be little or nothing, are, nevertheless, carefully concealed. Bones are bought here at from half to one cent per pound.

A great deal of lime is used in the operations of the sugar manufactory, say from a peck to a bushel per day. It is well for manufacturers to make their own. It must be of finer quality than that used in masonry. The lime manufactured from the chips and waste pieces of marble is considered the purest of any, made on a large scale. The convenience and economy of having your work situated upon navigable water will not have escaped the attention of yourself and associates. An abundance of pure water is required by a beet sugary, (*sucrerie*, the word commonly used by the French.) This may be taken from a river or canal, if it be clean. Here it is generally taken from wells with forcing pumps worked by steam. The reason is, that the waters of the rivers and canals of this country are very dirty. In the manufactory where I have hitherto been, the quantity used is about 15,000 gallons per day.

Seasonable provision must be made of bricks or wood for a building 150 feet long, 50 wide, and 30 high. Besides this, there will be a low part for a steam engine, for a furnace to re-burn the coal, and a kitchen where part of the utensils must be washed every day. This will be of the above length, and 15 feet in breadth. I am not yet satisfied what is the best plan for a building. I give the above dimensions as embracing sufficient materials for any form. I may hereafter think that it would be better to increase the height and diminish the length. The walls should be thick and substantial, but clay mortar and second quality of brick are used.

The steam engine can be made as well in the United States as any where. It will be sufficient if the boiler be of 40-horse power, and the machine 12. Perhaps in the course of three or four years we should want greater powers; but, in that case, an exchange or sale could be easily made, and greater subsitituted, when operations are suspended, as they will be of course, during the spring and summer. Such an engine would be sufficient for working up 10,000,000 lbs. of beets per annum, producing not less than 500,000 lbs. of sugar. The engine ought to be delivered and the buildings commenced by the first of next July, if you intend to go on this year. I shall send drawings of an engine when I address you again. Several months later than July would be better than to let the year go by without beginning. If working were commenced this year, although little were done, every thing would be in readiness to go at it better next year, and you would proceed with confidence and satisfaction to make a large crop of beets. If no more were accomplished this year than merely to get together the utensils, set up the machinery, and make a fair trial of them for one week, it would be well worth the interest of the capital for one year, in the increased confidence, facility, and punctuality which it would impart to all the operations of the ensuing year. There are seven months from the last days of August, (at which I should prefer to begin,) in the very last week of which you might make the experiment of which I speak, and enable yourself to detect any faults or deficiencies, and remedy them against the coming year.

There are portions of the machinery which it would perhaps be advisable, if not necessary, to procure in this country, in order that they might be good, and serve as models to mechanics who have no experience in the matter; thus American mechanics would be able to execute additional ones as they should be wanted. I will name the principal articles which would be indispensable to a beginning on the smallest scale, suppose you to procure the steam engine in the United States. They are those which could not, I think, be well made in the United States, nor made in any manner there without great delay, trouble, and, in all probability, greater expense than would be incurred in getting them here: 1 rasp, $200; 2 presses, $1,200; 1 table, $75; 1 desiccating kettle, $250; 1 evaporating trough, $200; 1 boiler, $150; 1 cooler, $100. Total, $2,175.

I would also suggest to the company that I be authorized to engage one or two good workmen. They could be had for less than a common laborer in the United States, and they are willing to make considerable sacrifices for the sake of getting to our country.

And now, my dear friend, I believe I have said as much as is needful at this time. I shall address you again at no distant day. I propose to continue in this place about three months, and return to the United States in all of May and June. It is my wish, not only to perfect myself in all the operations of the beet sugary, but also to observe the *several systems* which exist, and compare them with one another. I shall return to the United States by way of England, chiefly for the purpose of conferring with an eminent chemist, who has kindly proposed to instruct me in a new method of refining, which he has discovered and patented.

I am affectionately, your friend,

D. L. CHILD.

Geo. Kimball, Esq.

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[From Poulson's American.]

## BLAST IN PEAR TREES.

At the April meeting of the Pennsylvania Horticultural Society, the following communication was received:

The undersigned would respectfully inform the society, that he has known to be practised with success the following method of preventing the blast or blight in this delicate and useful tree. It is by merely *cutting out* a strip of the bark of the tree from the trunk and from the lower limbs, of the width of a half to a quarter of an inch, or greater, according to the size and age of the tree. When cut from the trunk, it is not necessary that the excision should be more than one third of the length, but longer in a very vigorous stock would not be injurious. This operation should be made about the middle of June, if the weather be very warm, and if not, should be delayed until August. The *rationale*, or supposed rationale of this operation, is founded on the supposition that the sap of that tree, which is known to be remarkably abundant at that period, is affected by the heat of the sun, and the person making the experiment on touching the woody part of the stock will readily suppose there may be some reason for that idea, as it will prove to him that the sap and stock, particularly the former, are very much heated. It is proper to state the above is not considered as a discovery of his own or of his father, as the preventive was communicated to the father of the subscriber by the late Stephen Girard, esq., who practised the same with uniform success. I do not know that an operation of this kind in the month of June or July would save the tree from the effects of heavy frosts, but think it probable that a bare *incision* made in *December* might have the same beneficial result.

April 10, 1837. JESSE Y. CASTOR.

N. B. Mr. Girard thought a covering of cloth and liniment necessary, but experience has shown that precaution is useless. J. Y. C.

P. S. All persons possessing information on the above subject, are respectfully requested to communicate with the society.

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## HOW TO IMPROVE A POOR FARM.

Richard A. Leonard, of Middletown, N. J. has furnished us an interesting account of his manner of improving a worn-out farm, and of the sale of its products the last year; and we regret that from the great accumulation of matter on hand, we cannot give his letter in detail. We are obliged to content ourselves with a brief abstract of material facts.

Mr. Leonard came into possession of 90 acres of cultivated but exhausted land in May, 1833. In that year the sale of its products amounted to $550 88; in 1834, the sales amounted to $718

05; in 1835 to $1,125 04; and in 1836, notwithstanding the unfavorable season, and the failure of most of his staple crops, to $1,166 19—thus more than doubling its products, by judicious management in three years. His expense during the last year, for labor, dung and freight, amounted to $254 72—thus leaving him a nett profit on his farm of $912 41—or more than $100 per acre per annum. We will quote Mr. Leonard's statement of the means he adopted to thus double the fertility of his soil.

"My farm," says he, "was in so low a condition that it would not produce more than ten bushels of rye, or twenty of corn per acre; and as I had no other income but what I could make upon this poor farm, I set about farming in earnest. I found it was in vain to attempt improvement without manure, so I contrived to get about 400 loads a year, 300 of which I made in the following manner. I have marl, though of very inferior quality. I cart about 100 loads of this into my barn yard, and by yarding my cattle upon it thro' the season, contrive to increase it to 200 loads. I also cart about 50 loads to my hog pen, on which I keep my hogs the year round. In this way I got 100 loads more, which is excellent for potatoes, corn, &c., and as my farm is situate near the bay, I obtain from New York annually, from 50 75 loads of the best stable dung, at about $1 per load on delivery, and by mixing it with the earth, &c. made up the 400 loads. By this treatment, I find my land improve rapidly, and my income in like proportion. But I am sorry to say there are many farmers among us who are still pursuing the old land-killing system, scarcely making both ends meet. I might say something concerning the beneficial results of underdraining, and of lime as a manure; but I conclude for the present."

This communication affords a worthy example of prudent industry and good management, and shows that even a poor farm, well managed, may be rendered more productive than many a good farm now is, under bad management.—*Cultivator.*

## MANURE.

A Virginia farmer makes the following remarks upon the mode of carrying out manure:

As soon as the winter stock of my manure, or any part of it is ready to cart out, I start my manure carts (unless the ground is wet) to carrying on the land intended for corn, and get as much out as I can before I plough the land; which is spread and ploughed under the sod. If I have any of the previous summer manure left on hand, I prefer to spread it on the fresh ploughed land, and harrow or lightly plough it in, on account of its being better rotted.

I generally have a bit of ground to sow in oats in the spring, upon which I carry out my early summer manure after harvest, and then fallow the same for wheat.

When my corn land is ready for seeding (which never is until I have the corn and stalks off the ground) my carts begin to carry out so much manure as may be on hand, to the poorest parts of my corn land and continue until I am done sowing, which is generally late; as I wait to get the corn hauled off the ground, I am unable to commence as soon as my neighbors on that kind of land. It will not do when I have furrowed and dressed off my wheat lots to be running carts in for corn and stalks.

As to the best mode of giving manure to land, my opinion is, that it will be found in applying it i the preparation for the wheat crop, but the prudent farmer must give it to something just as fast as he can make it ready, else not only is the interest lost, but a good per cent. of the principal also.

I would here suggest an improvement in the plan generally pursued in carting out manure upon the land. It is this—when I am about to commence the manuring process, I provide myself with an armful of small sticks, three or four feet long, newly split out, that they may be more readily seen by the carters, which I stick down about on the ground to be operated upon, one where every load is to go. Thus if the land is poor, and I design to put 50 loads to the acre, I fix that number of sticks, regularly according to the need of the land as I myself may judge. Thus I can lay off two or three days' work for as many carts any time before hand that suits me. This I think is better than the common mode hereabouts. The carter is directed to carry out upon a certain hill or otherwise as may be—he perhaps puts some about—on ground that would require fifty loads, he puts twenty; and on land that would have done with twenty, he puts fifty loads at unsuitable distances from each other; then, after hands are sent to spread the manure, perhaps a week or two before the plough goes, and with sticks and hoes, they pull the piles about a little, giving to some spots too much and others none; and the consequenee is a very irregular crop.

In order to do this spreading business well, (and no business of the farmer is more important) every hand should be provided with a long handle shovel; then at a throw, they can easily spread to the half way distance between the piles.

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[From the New York Star.]

WONDERFUL DISCOVERY OF MECHANICAL POWER.—Several of the papers have referred to an immensely important application of magnetic power, which can be applied with great safety to the propelling of steamboats, locomotives, or to any branch of manufactures, requiring power of an inexhaustible character. Mr. Thomas Davenport, a blacksmith of Vermont, is the inventor, and Professors Silliman and Henry both speak in high terms of the improvement and its application. Mr. Davenport has associated with him Mr. Ransom Cook, of Saratoga Springs, who has suggested many improvements in this surprising invention; and we believe all that is required is *means* to carry out this novel application. And where would steamboats, and steam batteries and engine have been in this country, if Fulton and Chancellor Livingston had not expended their own money to carry out the bold project? This new power is safer—no danger, no explosion, no fuel, very little expense, and immense expedition. The editor of the New Era, a scientific man in these matters, has the following practical illustrations in his paper this morning.

1. We saw a small cylindrical battery, about 9 inches in length, 3 or 4 in diameter, produce a magnetic power of about 300 lbs., and which therefore we could not move with our utmost strength. No 2. We saw a small wheel, 5½ inches in diameter, performing more than 300 revolutions in a minute, and lift a weight of 24 lbs. one foot per minute, from the power of a battery of smaller dimensions. 3. We saw the model of a locomotive engine, travellingon a circular rail road with immense velocity, and rapidly ascending an inclined plane of far greater elevation than any hitherto ascended by steam power. And these and various other experiments which we saw, convinced us of the truth of the opinion expressed by Professors Silliman, Renwick, and others, that the power of machinery may be increased from this source beyond any assignable limits. It is computed by these learned men, that a circular galvanic battery, about 3 inches in diameter, with magnets of a proportionable surface, would produce at least an hundred horse power, and therefore that two such batteries would be sufficient to propel ships of the largest class across the Atlantic. The only materials required to generate and continue this power for such a voyage, would be a few thin sheets of copper and zinc, and a few gallons of mineral water.

Whilst the cost of this new motive power is merely nominal, it is perfectly safe and manageable. There is not a possibility of any shock or explosion, and the whole machinery might be conducted by a child. We hastily announce these important features of this incalculably important invention, preparatory to a more scientific and practical elucidation.

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STALL FEEDING, *vs.* YARDING—Mr. Chapman, of Linwood farm, Rhinebeck, has sent us a communication in reply to A. B. C. against stall feeding. He gives it as his opinion, matured by 30 years' experience on both continents, that cattle will fatten with greater facility, and less expense, in the stall than in the yard. He says stables should be well ventilated, and frequently cleaned and well littered; and that the cattle should be regularly fed and watered. In laying on fat, he thinks a moderate degree of warmth, so as to cause a slight perspiration, and a variety of feed, contribute essentially to this object. He stables all his cattle, except the year olds. The manure is deposited in piles at the stable doors, and every few days removed to the fields where it is to be used for summer crops, and deposited in long heaps.—*Cultivator.*

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*Cotton Seed Oil.*—Among the many discoveries and improvements in the arts of the present age, is that of manufacturing Oil from the Cotton Seed as a substitute for Sperm Oil. The seed is first hulled and then pressed out, and the oil is then clarified. This oil has been tested in Philadelphia and Burlington, and found to be superior in more than one respect, to the Sperm oil. It burns with a clear brilliant light color, and is less affected by cold than the oils generally used. It has also been found to be good for paint oil. The oil bran is very valuable for feed, and thought to be equal to the linseed bran or oil cake. A charter has been obtained from the Legislature of New Jersey, and it is expected that an establishment for manufacturing the oil will go into operation the ensuing summer, either in Burlington or Gloucester county.—*Farmers' Cabinet.*

## BALTIMORE PRODUCE MARKET.

☞ These Prices are carefully corrected every MONDA

| | PER | FROM | TO |
|---|---|---|---|
| BEANS, white field, | bushel. | 1 50 | 1 75 |
| CATTLE, on the hoof, | 100lbs | 7 50 | 9 50 |
| CORN, yellow | bushel | 85 | 86 |
| White, | " | 80 | — |
| COTTON, Virginia, | pound | — | — |
| North Carolina, | " | — | — |
| Upland, | " | — | — |
| Louisiana 20a21—Alabama | " | — | — |
| FEATHERS, | pound. | 50 | 52 |
| FLAXSEED, | bushel. | 1 37 | 1 50 |
| FLOUR & MEAL—Best wh. wh't fam. | barrel. | 11 00 | 12 00 |
| Do. do. baker's | " | — | — |
| Do. do. Superfine, ex. | " | 8 75 | 8 50 |
| Super How. st. in good de'd | " | 9 00 | — |
| " " wagon price, | " | — | — |
| City Mills, super | " | 8 00 | — |
| Do extra | " | 8 25 | — |
| Susquehanna, | " | 9 00 | — |
| Rye, | " | 6 50 | 6 75 |
| Kiln-dried Meal, in hhds. | hhd. | — | — |
| do. in bbls. | bbl. | — | — |
| GRASS SEEDS, red Clover, | bushel. | 6 00 | 6 50 |
| Timothy (herds of the north) | " | 3 00 | 3 50 |
| Orchard, | " | — | 3 00 |
| Tall meadow Oat, | " | — | 2 75 |
| Herds, or red top, | " | — | 1 25 |
| HAY, in bulk, | ton. | 15 00 | 18 00 |
| HEMP, country, dew rotted, | pound. | 6 | 7 |
| " water rotted, | " | 7 | 8 |
| HOGS, on the hoof, | 100lb. | 6 25 | 6 50 |
| Slaughtered, | " | — | — |
| HOPS—first sort, | pound. | 17 | — |
| second, | " | 13 | — |
| refuse, | " | 12 | — |
| LIME, | bushel. | 35 | 37 |
| MUSTARD SEED, Domestic, —; blk. | " | 3 50 | 4 00 |
| OATS, | " | 45 | 46 |
| PEAS, red eye, | bushel. | — | — |
| Black eye, | " | 1 12 | — |
| Lady, | " | — | — |
| PLASTER PARIS, in the stone, | ton. | 4 87 | — |
| Ground, | barrel. | 1 62 | — |
| PALMA CHRISTA BEAN, | bushel. | — | — |
| RAGS, | pound. | 3 | 4 |
| RYE, | bushel. | 90 | — |
| Susquehannah, | " | — | none |
| TOBACCO, crop, common, | 100 lbs | 2 50 | 3 00 |
| " brown and red, | " | 3 50 | 5 00 |
| " fine red, | " | 8 00 | 10 00 |
| " wrappery, suitable for segars, | " | 10 00 | 20 00 |
| " yellow and red, | " | 8 00 | 10 00 |
| " good yellow, | " | 8 00 | 12 90 |
| " fine yellow, | " | 12 00 | 16 00 |
| Seconds, as in quality, | " | — | — |
| " ground leaf, | " | — | — |
| Virginia, | " | 4 50 | 9 00 |
| Rappahannock, | " | — | — |
| Kentucky, | " | 4 00 | 8 00 |
| WHEAT, white, | bushel. | — | — |
| Red, best | " | 1 40 | 1 50 |
| fair to good 100a130, inferior | " | — | — |
| WHISKEY, 1st pf. in bbls. | gallon. | 38 | sales |
| " in hhds. | " | 35 | do |
| " wagon price, | " | bbls | — |
| WAGON FREIGHTS, to Pittsburgh, | 100 lbs | 1 50 | — |
| To Wheeling, | " | 1 75 | — |
| | | washed. | unwash |
| WOOL, Prime & Saxon Fleeces, | pound. | 50 to 60 | 30 32 |
| Full Merino, | " | 45 50 | 26 30 |
| Three fourths Merino, | " | 40 45 | 24 26 |
| One half do | " | 36 40 | 22 24 |
| Common & one fourth Meri. | " | 33 36 | 20 22 |
| Pulled, | " | 36 38 | 24 26 |

REMARK—The prices are but nominal, as there are but few transactions.

## A JENNET FOR SALE.

THE subscriber has for sale a JENNET of good size and unexceptionable pedigree. She is 13 years old, and warranted sound. As her owner is desirous of selling her a bargain will be given in her. Applications made in writing must be post paid, to EDW. P. ROBERTS,
ap 25 Baltimore, Md.

## BALTIMORE PROVISION MARKET.

| | PER. | FROM. | TO. |
|---|---|---|---|
| APPLES, | barrel. | — | — |
| BACON, hams, new, Balt. cured | pound. | 11 | 12 |
| Shoulders, do | " | 11 | 11½ |
| Middlings, do | " | do | do |
| Assorted, country, | " | 8 | — |
| BUTTER, printed, in lbs. & half lbs. | " | 25 | 37½ |
| Roll, | " | 25 | 31½ |
| CIDER, | barrel. | — | — |
| CALVES, three to six weeks old | each. | 5 00 | 7 00 |
| COWS, new milch, | " | 26 00 | 40 00 |
| Dry, | " | 10 00 | 13 00 |
| CORN MEAL, for family use, | 100lbs. | — | — |
| CHOP RYE, | " | 2 00 | — |
| EGGS, | dozen. | 18 | — |
| FISH, Shad, No. 1, Susquehanna, | barrel. | — | — |
| No. 2, | " | — | — |
| Herrings, salted, No. 1, | " | 2 75 | — |
| Mackerel, No. 1, —— No. 2 | " | 9 50 | 10 00 |
| No. 3, | " | — | 5 50 |
| Cod, salted, | cwt. | 3 00 | 3 25 |
| LARD, | pound. | 11½ | 12 |

## BANK NOTE TABLE.

Corrected for the Farmer & Gardener, by Samuel Winchester, Lottery & Exchange Broker, No. 94, corner of Baltimore and North streets.

| | | | |
|---|---|---|---|
| U. S. Bank, | par | VIRGINIA. | |
| Branch at Baltimore, | do | Farmers Bank of Virgin. | 2 |
| Other Branches, | do | Bank of Virginia, | do |
| MARYLAND. | | Branch at Fredericksburg | do |
| Banks in Baltimore, | par | Petersburg, | do |
| Hagerstown, | ½a | Norfolk, | do |
| Frederick, | do | Winchester, | 2a2½ |
| Westminster, | do | Lynchburg, | 2½ |
| Farmers' Bank of Mary'd, | do | Danville, | do |
| Do. payable at Easton, | 1 | Bank of the Valley, | 2 |
| Salisbury, | 2 per ct. dis. | Branch at Romney, | 2½ |
| Cumberland, | 2 | Do. Charlestown, | 2 |
| Millington, | do | Do. Leesburg, | 2 |
| DISTRICT. | | Wheeling Banks, | 4 |
| Washington, Georgetown, Alexandria, | Banks, ½p.c. | Ohio Banks, generally | 6a7 |
| PENNSYLVANIA. | | New Jersey Banks gen. | 5 |
| Philadelphia, | ½a | New York City, | 1 |
| Chambersburg, | 1 | New York State, | 6a7 |
| Gettysburg | do | Massachusetts, | 3a3½ |
| Pittsburg, | 3½ | Connecticut, | 3a3½ |
| York, | 1 | New Hampshire, | 3a3½ |
| Other Pennsylvania Bks. | 4 | Maine, | 3a3½ |
| Delaware [under $5] | 6 | Rhode Island, | 3a3½ |
| Do. [over 5] | 2 | North Carolina, | 6 |
| Michigan Banks, | 10 | South Carolina, | 8a10 |
| Canadian do. | 10 | Georgia, | do |
| | | New Orleans | 15 |

## A FARM FOR SALE.

THE subscriber has for sale a farm situate in Prince George's County, Md. It contains 150 acres of good land, one-third of which is very heavily timbered. A large proportion of the cleared land is in meadow, well set in Timothy, the balance is all in clover, with the exception of 10 acres seeded in oats, clover and timothy. The enclosures are good. The improvements, a small dwelling, an excellent NEW BARN. The soil is adapted to the growth of all kinds of grass and grain, and is as susceptible of permanent improvement as any land in the county. It is remarkably healthy and handsomely situated. Should the person desirous of purchasing, wish more land, the owner would have no objection to increase the quantity of wood or cleared land. The Baltimore and Washington rail road passes through the farm, it being situate within half a mile of the depot at Beltsville; thus offering great facilities of transportation, and the choice of two markets, advantages not often enjoyed. A CREDIT of 1 and 2 years will be given on two-thirds the amount of purchase money; CASH will be required for the other third; but should an eligible purchaser be obtained, the terms would be made to suit his convenience, as one great object of the owner, who has an estate adjoining, is to secure an enterprising agricultural neigbbor.

Applications post paid to be addressed to
EDWARD P. ROBERTS,
Baltimore, Md.

## 13,000 MORUS MULTICAULIS TREES.

The subscriber has received 13,000 Morus Multicaulis trees, which he offers for sale on pleasing terms for cash. They are warranted genuine, and if taken in their original packages bargains may be expected.

EDW. P. ROBERTS,
March 7. 4t. Baltimore, Md.

## AMERICAN FARMER.

COMPLETE sets of this excellent periodical, consisting of 15 volumes each,

Also ROBERTS' SILK MANUAL, a work of general utility, comprising all the information necessary to be known in the culture of the Mulberry and growth of Silk.

The above works are offered for sale, at the office of the FARMER and GARDENER, North-east corner of Baltimore and Charles streets, Baltimore, Md.

April 18, 1837.

## PATENT HORSE SHOES,

Made of best refined Iron, and every shoe warranted—Any failing to render the most perfect satisfaction will be received back, and the money paid for the same refunded. A constant supply for sale by

THOMAS JANVIER, Agent,
87 Smith's wharf.

P. S. Henry Burden of Troy, N Y. has obtained letters patent from the government of France, granting him the exclusive privilege of manufacturing horse shoes by his *newly* invented machines. nov 22 3m

## FARMERS' REPOSITORY,

*Pratt street near Hanover street.*

The subscriber is the Original Inventor, Patentee, and Sole-Proprietor of the Cylindrical straw Cutter, so favorably known to the public; he challenges its equal for chaffing long forage of any and every kind, it is simple, durable, cuts with great facility, and is perfectly adapted to power. There are four sizes of them, from 11 to 20 inches broad, although they may all be worked by manual labor, yet the two largest are best calculated for Power Machines; price from $30 to 95.

He keeps on hand a great variety of PLOUGHS and almost every other useful implement for agriculture, the most prominent of which are Patent Lime Spreading Carts, do Threshing Machines, do Wheat Fans, Corn Shellers, Cultivators, superior Pennsylvania made Grain Cradles, &c also trucks for use of Merchants. Has attached to his Improvements an extensive Iron Foundry in daily operation, and can furnish almost any kind of Iron Casting at short notice. Also tilt hammer, Lathes, &c. running by Steam Power, which afford him great facilities for Manufacturing Machinery, Screw Bolts and the like.

He has a large Stock of raw Materials on hand of the best quality, his workmen are men of experience the most of whom have been several years in his employ and he is a practical machinist himself. Under these circumstances, he confidently solicits the public patronage, pledging himself to use every exertion to render entire satisfaction to his patrons. He keeps constantly on hand Ploughs and Mechine Castings for sale by the single piece, or to venders by the ton, to whom a liberal discount will be made on Ploughs and Straw Cutters, when taken by the quantity. He likewise deals in Grass Seeds and Seed Grain, has in store superior Orchard Grass and Herds Grass Seed. J. S. EASTMAN.

N. B. Also on hand superior GARDEN SEED, grown and warranted by Mr. D. Landreth of Philadelphia, on retail only. Wholesale orders will be received and forwarded on to Philadelphia, by the subscriber for execution. ap 4 J. S. E.

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